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1952

INNOVAL BEST FOR ALL ELECTRONIC APPLICATIONS

Amateur Radio

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INSTITUTE OF
AUSTRALIA

For the Experimenter
and Radio Enthusiast



9_{D.}

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A blue-toned illustration of a vintage Philips vacuum tube radio. The radio is anthropomorphized with a smiling face. A hand is shown adjusting a dial on the front, while another hand holds a small electronic component. Musical notes float around the radio. The text "It's the valve that makes the music" is written diagonally across the right side of the illustration. The Philips logo is at the bottom right of the illustration area.

It's the valve
that makes
the music

PHILIPS

INNOVAL

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1L4	10/-	6BE6	15/-	6J5GT	10/-	6SN7	15/-	12A6	10/-	1629	10/-	9604	10/-
1L5	7/6	6C5	10/-	6J6	15/-	6SS7	10/-	12AH7	10/-	2051	10/-	0A4	10/-
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6000 Kc.	7033 Kc.	7175 Kc.	8183.5 Kc.
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	7041 Kc.	8021.5 Kc.	

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WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK3WI: Sundays, 1100 hours EST, 7145 Kc. and 3000 hours EST 50 and 144 Mc. No frequency checks available from VK3WI. Intra-state working frequency, 7125 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3575 and 7145 Kc. and re-broadcast on 50 and 144 Mc. Intra-state working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0930 hours EST, simultaneously on 7145 and 1435 Kc. 7095 Kc. channel is used from 0930 to 1030 hours each Sunday for the W.I.A. country back-up. No frequency checks available.

VK5WI: Sundays, 1000 hours EAST, on 7145 Kc. Frequency checks are given by VK5DW by arrangements only on the 7 and 14 Mc. bands.

VK6WI: Sundays, 0930 hours WEST, on 7145 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7145 Kc. and 145.5 Mc. No frequency checks are available.

EDITORIAL



"I WAS TELEVISED IN 1952"

Twenty years from now—maybe less, maybe more—thousands of Australian people can cast their minds back to a crowded, noisy, echoing building, where children, along with their parents, enjoyed and were intrigued by an "All Hobbies Exhibition" such as they had never seen before.

At this time, when Television will probably be as commonplace as ordinary amplitude modulated broadcast reception is today, these same people will be telling their children and grand-children, "I was televised in 1952."

This fact in itself was probably not unique because many Australian people saw themselves televised as far back as 1949. But what was unique is the fact that the television equipment with which they were televised was Amateur equipment; the first known Amateur television equipment in Australia.

This was a working exhibit at the Exhibition, completely home-built and installed by Len Moncur, VK3LN, on the stand of the Wireless Institute of Australia, Victorian Division.

As far back as radio goes, the Amateur has been in the forefront in experimenting: from the broadcast frequencies to the shortwave frequencies, from the shortwave frequencies to the very high frequencies, from the very high frequencies to the ultra high frequencies, the Amateur has shown his ability to pioneer the unknown. And now an Amateur has shown, with limited knowledge and equipment, his ability to experiment in the field of television. Admittedly the equipment was relatively simple 130 line tele-

vision on a closed circuit, but given the opportunity, the availability of equipment, the authority to actually transmit the images, there is not a shadow of doubt that the Amateur could continue to improve on this as he has done in the past with other forms of transmission and experimentation.

One day television will come to Australia with all its requirements of highly skilled technicians and operators. The British Post Office has seen fit to license Amateurs in the United Kingdom to conduct Amateur television transmissions in the u.h.f. spectrum, and already two Amateurs have created a milestone in the history of Amateur Radio by successfully conducting the first two-way Amateur television QSO.

The Wireless Institute of Australia is negotiating with the Postmaster-General's Department for permission for Australian Amateurs to conduct television transmissions. The Department would do well to appreciate the great asset of having even a small percentage of the 3,000 odd licensed Amateurs of Australia interested in television, because from the ranks of the Amateurs will come many of the skilled technicians and operators the television industry will ultimately require.

The 625 line television expected in Australia with its inherent complicated circuitry will be far removed from the simple television seen in Melbourne in 1952, but the basic fundamentals must still be understood. What better opportunity is there to educate manpower than to give the Amateurs an early chance to study and experiment?

FEDERAL EXECUTIVE

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A Unique Crystal Converter for 50 and 144 Mc.

BY C. D. L. TILBROOK,* VK5GL

With the growing interest for v.h.f. experimenting, comes the desire for a receiver capable of doing justice to the bands allocated above 28 Mc. It is quite apparent also that the 6 and 2 metre bands are receiving much more attention for local working, and results obtained with good equipment outpace the lower frequencies for this purpose. The writer has used this type of converter on 28, 50, 144 and 288 Mc., and has no desire to revert to the ordinary type of converter after having appreciated the following features:—

- Set the receiver on a known frequency and wait for that station to come up.
- Read c.w. on 6, 2 and 1 metre with a note like that from an 80 metre crystal transmitter.
- Tune simultaneously, if desired, on the same dial the entire 6 and 2 metre bands.
- Use one good dial (which everybody should have on the station receiver) to tune v.h.f. bands.
- Use the calibrations on the station receiver to read direct in the frequency without reference to a chart or extra dial.
- Listen to more than one station on different frequencies in the same band simultaneously (with the aid of another low frequency receiver).
- Use the transmitter as the local oscillator for duplex working, thus eliminating "birdies."

The circuit shown herewith was designed with these points in mind and although a dual unit is described, the principles are the same for single band use.

CIRCUIT

The circuit in general can be described as a push-pull neutralised triode r.f. stage, push push triode mixer, followed by a cathode follower and a fixed crystal oscillator and multipliers. The oscillator can be of the usual triode type or can incorporate an overtone type oscillator if desired.

In the circuit detailed, the triode was chosen as it is more readily adapted to experimenting with different crystal frequencies to give various effects which will be described later.

MAIN RECEIVER

It is essential, of course, that the receiver to which the converter is coupled, has a good dial, good frequency stability, and if maximum advantage is to be had from the converter, a dial calibrated in 100 Kc. steps or better. Between 3 and 7 Mc., drift in the main receiver will, of course, reflect in the converter's performance, but not to such a degree as would be apparent on a variable oscillator type of converter on the v.h.f.

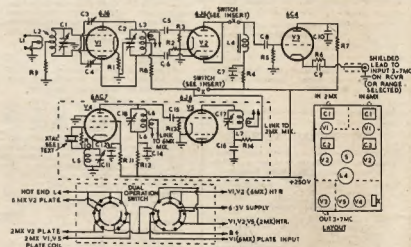
PRINCIPLE OF OPERATION

To cover briefly the principle of operation, let us take as an example the standard superhetrodyne. In this we have (a) a fixed i.f. frequency, say 455 Kc.; (b) a variable oscillator to create the difference or sum, and (c) the fixed station to which we wish to listen. Here we vary the tuneable oscillator to be plus 455 Kc. on to say 1,000 Kc. = 1455 Kc., or minus 455 Kc. from 1,000 Kc. = 545 Kc. By changing things around we could have a fixed or crystal oscillator on either 1455 Kc. or 545 Kc. with the input to the mixer tuned to 1,000 Kc. and a fixed i.f. frequency of 455 Kc. This would give the same result as the previous arrangement. Now if we could tune the i.f. frequency to 465 Kc. using the oscillator fixed at 545 Kc., we would then receive a signal operating on 1010 Kc., or by tuning the i.f. to 445 Kc., we would receive a station on 990 Kc. By using the oscillator fixed at 1455 Kc. we would get the same effect in reverse, e.g. to tune a station higher in frequency than 1,000 Kc., you would need to increase capacity (tune away from the local oscillator 1455 Kc.). For many obvious reasons this arrangement would not be very practical, as we are already receiving the benefit of tuning at low frequencies.

Besides this, if the low frequency local oscillator of say 100 Kc. was used, a carrier would appear every 100 Kc. on the tuning dial unless very strenuous efforts were made to eliminate them.

Let us take a more practical example to suit the Amateur bands based on the above principles. Taking a mixer oscillator combination, suppose we have the oscillator or output of a multiplier on 47 Mc., tune the output of the mixer to a 3 Mc. channel. If a carrier was running right on 50 Mc., a beat will be set up by the difference between the 47 Mc. local oscillator and the signal 50 Mc. = 3 Mc. If the local oscillator was adjusted for 48 Mc. under the same conditions by changing the crystal, the beat will be at 2 Mc. and so on. By the same reasoning, if, when using the 47 Mc. oscillator, a signal comes up on 51 Mc., a beat of 4 Mc. with the incoming signal will be set up.

It can be seen from the above that by tuning the output of the mixer between 3 and 4 Mc., a frequency tuned on 3.1 Mc. would be equivalent to an input frequency of 50.1. 3.2 = 50.2, and so on throughout the entire 4 Mc. of tuning from 3 to 7 Mc. It is of course necessary to trim up the mixer and r.f. stage input for maximum sensitivity, but



- C1, C2—8 x 8 pF. butterfly (Eddystone Cat. No. 739).
C3, C4—See text (neutralising conds.).
C5, C6—68 pF. ceramic.
C7, C10, C12, C14—0.01 uF. mica.
C8—500 pF.
C9, C16—0.001 uF. mica.
C11—60 or 100 pF. variable midget.
C13—25 pF. variable midget.
C15—50 pF.
C17—10 pF. variable midget.
R1—100 ohms, ½ w.
R2, R3—1.5 megohms, ½ w.
R4—10,000 ohms, 1 w.
R5—5,000 ohms, ½ w.

- R6, R7—1,000 ohms, 1 w.
R8—20,000 ohms, 2 w.
R9—100,000 ohms, ½ w.
R10—15,000 ohms, ½ w.
R11—100,000 ohms, 1 w.
R12, R14—30,000 ohms, 1 w.
R13—75,000 ohms, ½ w.
6J6 Socket Connections—
Pin 1—Plate No. 1.
Pin 2—Plate No. 2.
Pin 3—Heater.
Pin 4—Heater.
Pin 5—Grid No. 2.
Pin 6—Grid No. 1.
Pin 7—Cathode.

* C/o. Gerard & Goodman Ltd., 192-198 Rundle Street, Adelaide, S.A.

this is reasonably broad and needs only a plain knob adjustment.

It is not absolutely necessary to use the range 3-7 Mc. when building single band units, but with the dual unit described, it is essential as by adding a treble to the 47 Mc. output of the local oscillator, we get a frequency of 141 Mc. and 3 Mc. away from 144 Mc. It is this fact that allows both bands to be tuned simultaneously. If it is desired with single units to use a different i.f. tuning channel, it is only necessary to select the range desired for tuning, say 7-11 Mc. and fix the local oscillator at a frequency equal to the difference between the lowest signal frequency 50 Mc. and 7 Mc. = 43 Mc.

Here a word of warning can be added on the use of overtone type oscillators. A crystal with a fundamental frequency of 8.6 Mc. will not give exactly 43 Mc. on the fifth overtone, but in most cases will be slightly lower. When "locking" this type of oscillator, do not listen on the fundamental frequency of crystal, but on the harmonic on which the output is required. The accuracy of the crystal used in these types of converters is most important if calibration is required to be on the dot, especially on the 144 Mc. unit.

CONSTRUCTION DETAILS

It is assumed that anyone considering the construction of a converter of this type would be conversant with the finer details of construction. Usual v.h.f. wiring practices and mounting of components is the main point to watch.

Any chassis layout can be selected, but the one suggested on the circuit lends itself to short leads and good symmetry where it is required most—in the v.h.f. circuits.

It is a good idea to start the construction by building the complete oscillator section, making sure that output is obtained on 47 and 141 Mc. This can be best verified by the old reliable absorption type wavemeter, as it is quite easy to pick the wrong harmonic when first tuning up.

Next is the cathode follower which is quite straightforward, the output of which is fed into a shielded output. The Pye co-axial connectors available from disposals are excellent for this purpose.

After this has been finished, it is recommended that the 50 Mc. "front end" be completed. When the mixer is finished, signals should be heard without the r.f. stage if the aerial is coupled to the mixer input coil. This will enable adjustments to be made in preparation to neutralising the r.f. stage. A strong six metre signal should be audible even if the coil is somewhere near correct. Slight pruning and adjustment will put the resonance point in the correct place without the worry of the station shifting about by coil adjustments.

The same action should then be carried out on the r.f. stage, adjusting aerial coupling, etc., for maximum performance. It is suggested that the value of R8 be increased to around 50K ohm during the neutralising process and when satisfactory neutralising has been effected, the correct voltage be applied. The link from the oscillator to mixer consists of one turn close coupled to the cold end of the 47 Mc. plate coil and one turn close coupled to the centre of the mixer input coil. The same

applies to the 141 Mc. multiplier to the 2 metre mixer.

The inductance L4 in the plate circuit of the mixer is a broadly resonant coil slug-tuned to approximately 3 or 4 Mc. Although a disposals 1600 Kc. i.f. transformer with condensers removed from across the winding was used in the original model, the same effect can be had by using a grid coil of a standard broadcast aerial or r.f. coil. This is roughly resonant around 31 Megs., but is not critical, however, and is really the only "broadband" part of the converter.

CRYSTAL OSCILLATOR

Many combinations of fundamental crystal frequencies can be used. Originally 9.4 Mc. was used and later 11.75 Mc., as easy 6 and 2 metre operation can be obtained on the same tuning range. There is nothing against using a crystal of 7.8333 as the sixth harmonic will be on 47 Mc. An overtone oscillator operating on the third can be used to advantage here as it is only necessary to double once to get to 47 Mc. The writer often uses an 8 Mc. crystal plugged into the 9.4 Mc. crystal socket without any adjustment to tune the 50 Mc. band from 2 to 6 Mc. In fact as the 8 Mc. crystal multiplies to 144 Mc., good reception can be obtained on 50 Mc. without any crystal in the receiver at all with the 144 Mc. transmitter. The beat is produced between the 48 Mc. multiplier of the 144 Mc. transmitter and the 6 metre band tuned on the 2 to 6 Mc. tuning unit.

A crystal with a frequency of 12.3625 Mc. plugged into the socket without any other alteration to the converter, except feeding the output into the aerial terminal, allows the tuning of the first megacycle of the 50 Mc. band to be tuned on a broadcast receiver, 550-1600 Kc. This is worthy of consideration from a mobile point of view, using the car radio dial for easy tuning.

Many other combinations can be worked out to suit special requirements, but it is necessary to watch that harmonics do not fall in the band to be tuned.

NEUTRALISING

The condensers used for neutralising the 636 r.f. stages appear complicated, but in effect are quite simple. The writer used a ceramic strip which conveniently had 4 holes in the right place and brass plates above and below. The three penny piece were fixed to these. One of the plates was fixed off centre to an 1" brass bolt through the ceramic strip, thus allowing it to slide across and about 1/32" from the fixed plate. This small unit was mounted to the shield under the chassis between the r.f. and mixer stages, making possible very short symmetrical leads to connect to grids and opposite plates of the 636 r.f. stage.

There are, of course, many other ways of neutralising. One popular idea is to use a short piece of 70 ohm twin lead acting as a small condenser and cutting off a piece at a time until the correct neutralising has been obtained.

If a transmitter is available, neutralising can be accomplished very easily by inserting a meter in the c.t. of the input coil of the 636 r.f. stage, and very loosely coupling to the transmitter to

give a grid-current reading. Tuning the plate condenser will show a dip in the "grid" meter if not correctly neutralised and adjustments can be carried out to obtain the desired effect. Another method is to use a signal on the band with the filament of the 636 open circuit. Tune the neutralising condensers for minimum signal. If no signal is available, "cut and try" methods will eventually remove all sign of oscillations when the grid or plate condensers are varied.

MIXER-OSCILLATOR COUPLING

In the first instance, the link which connects a single turn around the cold end of the oscillator plate coil to one around the centre of the mixer input coil was switched, but it was found that detuning of the circuit was apparent and affected the drive to the tripler, making it necessary to adjust when switching between 6 and 2 metres. No detrimental effect, however, was noticed when these links were left connected and tuning of the oscillator and multiplier circuits was not affected.

THE CHANGEOVER SWITCH

It can readily be appreciated from the circuit that apart from the plates of the mixer which are at a low frequency anyway, the switching is only in power supply circuits, doing away with the trouble producing r.f. switch contacts. The rather complicated looking design is only necessary if simultaneous tuning of both bands is contemplated. If only 6 or 2 metres are to be tuned alternately, a much simpler arrangement would be a 2 position 3 pole switch, or if you don't mind the extra filaments running (enabling quick switchover), a 2 position 2 pole switch is sufficient. In the one described, the filaments of the section not in use are turned off. The plate connection from L4 and the h.t. to r.f. stage and 141 Mc. multiplier are switched in their correct sequence.

Of course if the converter is to be made for one band only, no switch is required at all.

COIL DATA

50 Mc.—

- L1-2 turns coupled to centre of L2.
- L2-8 turns No. 16, $\frac{1}{8}$ " diam., $\frac{1}{4}$ " long.
- L3-8 turns No. 16, $\frac{1}{8}$ " diam., $\frac{1}{4}$ " long.
- L4-See text.
- L5-18 turns No. 18, $\frac{1}{8}$ " diam., 1" long.
- L6-9 turns No. 18, $\frac{1}{8}$ " diam., 1" long.

144 Mc.—

- L1-2 turns coupled to centre of L2.
- L2-2 turns No. 16, $\frac{1}{8}$ " diam., $\frac{1}{4}$ " long.
- L3-3 turns No. 16, $\frac{1}{8}$ " diam., $\frac{1}{4}$ " long.
- L4-See text.
- L5-18 turns No. 18, $\frac{1}{8}$ " diam., 1" long.
- L6-9 turns No. 18, $\frac{1}{8}$ " diam., 1" long.
- L7-4 turns No. 18, $\frac{1}{8}$ " diam., $\frac{1}{4}$ " long.

OTHER APPLICATIONS

A unit similarly constructed except that it uses an overtone oscillator, giving an output on 25 Mc. from a 6C5, gives excellent results on the 28 Mc. band using the range 3 to 5 Mc. for tuning.

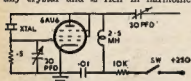
The 288 Mc. unit uses two 6J6s in the oscillator section—overtone oscillator using third overtone of a 10.56 Mc. crystal suitably ground to give 31.666 Mc.—trebling in the second half of 6J6 to 95 Mc. and driving a push pull 6J6 (Continued on Page 4)

A Crystal Marker for Amateur Receivers

BY C. A. CULLINAN,* VK7XW

Readers of "QST" and "CQ" may have noticed a tendency by some manufacturers of communications receivers to include a crystal marker. At first the use of such a marker may not appear to justify its existence, but those Amateurs who have included them are well aware of their advantages. The most obvious is that of checking the calibration of the receiver, or v.f.o., at any time without the necessity of setting up signal generators, etc.

The marker to be described was included in VK7XW's receiver quite a while ago and has repeatedly proved its worth. Basically a 6AU6 valve is employed as a Pierce oscillator. The Pierce was chosen as it does not require many parts, will oscillate with almost any crystal and is rich in harmonics.



Normally a 3.5 Mc. crystal is used, but the marker works beautifully with 200 Kc., 1,000 Kc., 3.5 Mc. and 8 Mc. crystals which are available. Coupling into the receiver is via two inches of wire.

* 64 Lawrence Vale Road, Launceston.

The trimmer condenser between grid and ground is absolutely necessary and may be used to obtain a vernier adjustment of frequency. If the crystal is a few cycles high in frequency it can be brought to dead zero beat on exact frequency.

However, this is not usually necessary unless a precision crystal is used as the usual run of crystals will shift slightly as they warm up and with changes in ambient temperature.

Anyhow, try one in your receiver and you will wonder how you got on without it before.

THAT 21 Mc. ANTENNA

Now that we have the 21 Mc. band another antenna is required. Quite a number will prefer beams, which on this band are not too large and can be erected fairly easily, but for the Amateur who does not want to put up a beam or a special antenna, what about the 7 Mc. dipole?

Many of us use a simple half-wave dipole fed in the centre with 75 ohm or 50 ohm coaxial cable. This aerial will operate very nicely as three half-waves on 21 Mc. The radiation pattern is a four lobe field with the major lobes towards the ends of the antenna. A 40 metre zepp will operate equally well on the 21 Mc. band.—VK2VW.

UNIQUE CRYSTAL CONVERTER

FOR 50 AND 144 Mc.

(Continued from Page 3)

treble to 285 Mc.—just 3 Mc. away from 288 Mc. The rest of the design is similar to that described above.

CONCLUSION

Earlier in this article it was mentioned that it was possible to listen to more than one station at a time through the same converter. It can be seen that if one or more extra receivers tuning the range 3 to 7 Mc. having their inputs suitably connected to the cathode follower output of the converter, other stations on the same band could be tuned independently. This has a great advantage in that it enables a watch to be kept on the band while in contact with another station. If, as an alternative, the i.f. tuning channel was the broadcast range, as many b.c. sets as available in the room would receive as many independent stations. This system, in restricted form, can be used to advantage for group monitoring purposes or for cross-band v.h.f. hook-ups. If you are located near a strong local broadcast station, certain spots on the band may be unusable due to broadcast signals leaking through that channel.

These suggestions have been mentioned only as a matter of interest. Perhaps many other applications can be found and individual modifications made in design to suit particular applications.

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	Maximum	At Full Rated D.C.				
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*983-1A	25	20/5	30/300	90	1,000	65/6
986-1A	15	10	300	60	1,000	62/6

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A Simple 80 Metre Transmitter

BY VAUGHAN WILSON,* VK2VW

With the Remembrance Day Contest looming in the offing and a study of the Ionospheric Predictions showed that the 80 metre band would provide most of the points during the hours of darkness, the writer decided that it was time to do something about a transmitter for that band.

A certain amount of thought was given to the matter and it was decided that the following requirements would have to be met:—

1. Funds being low, the transmitter would have to come out of the junk box.
2. The transmitter would have to be simple, and yet capable of 100 watts input.
3. As space was not available to erect a half-wave antenna, the transmitter would have to load satisfactorily into a short antenna without complicated aerial couplings units.

A few minutes sketching on a piece of paper evolved the circuit shown which would meet requirements two and three and a search of the junk box proved that requirement one could also be met.

In the writer's case the existing power supply and modulator were used and these are not shown in the circuit diagram. If you are starting off from scratch, any conventional power supply capable of delivering 500 volts at 250 Ma. and a modulator capable of 50 watts of audio will do the job. There are plenty of both described in the various handbooks.

The r.f. section of the transmitter is quite straightforward and no trouble should be experienced in getting it going.

The oscillator may be crystal controlled or alternatively the oscillator stage may be used as a buffer when v.f.o. control is desired. The method of coupling the v.f.o. to the buffer stage is of interest.

In the shack here the v.f.o. is about ten feet away from the transmitter and is coupled via a length of 70 ohm co-axial cable. The normal method of coupling a v.f.o. to a tuned grid circuit with small inductance coils, but in this case the output of the v.f.o. is on 80 metres and it was thought that a tuned grid and a tuned plate circuit was asking for trouble.

In the circuit shown, the 6V6 buffer operates as a grounded grid stage and will not oscillate. The r.f. from the v.f.o. is coupled into the cathode circuit across a resistor which terminates the characteristic impedance of the co-axial cable. The stage has some gain, quite sufficient to drive the 807s to 10 Ma. grid current. The total cathode current of the 6V6 is 35 Ma. with a plate voltage of 250 and a screen voltage of 200.

Precautions were taken against parasitics in the p.a. stage as a matter of course. It may work without the suppressors but it is advisable to include them to be on the safe side.

The p.a. output circuit is a little unconventional, but it works very efficiently and has the advantage that it will load satisfactorily into any load impedance from about 2 ohms to 100 ohms, which means almost any piece of wire up to about five-eighths of a wave long.

The coil is one of the revolving type taken from a piece of disposals equipment. Most junk boxes contain at least one. About 20 turns are all that are necessary.

Tuning procedure is simple. With the power on and the oscillator and/or buffer tuned to resonance, rotate the coil slowly, at the same time swinging the tuning condenser through its range until a setting is found where the plate

current dips. This indicates that the tank circuit and antenna are at resonance.

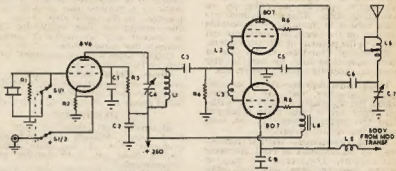
Now adjust the loading by means of slight variations of the coil, keeping the circuit at resonance by means of the condenser until the correct plate current is obtained. The transmitter is ready for use.

The efficiency of the aerial varies with length, naturally the shorter lengths being most inefficient, but it was found that six feet of wire would radiate a signal strong enough to get S9 from VK3-4-5.

This type of tank circuit, which is an adaptation of the familiar Collins Pi Coupler, would be ideal for mobile or portable equipment.

Typical meter readings obtained are shown below:

6V6 Cathode Current	35 Ma.
P.A. Plate Current	200 Ma.
P.A. Plate Volts	500 volts
P.A. Grid Current	10 Ma.



S1—2 position 3 section switch.

R1—50,000 ohm, 1 w.

R2—75 ohm carbon.

R3—10,000 ohm, 5 w.

R4—15,000 ohm, 2 w.

R5, R6—100 ohm carbon.

C1, C2—0.01 uF. 600 v.w.

C3—100 pF. 600 v.w.

C4—150 pF. variable.

C5—0.002 uF. 600 v.w.

C6, C2—0.002 uF. 1,000 v.w.

C7—150 pF. variable.

L1—30 turns 1" diam., spaced diam. of

wire—20 s.w.g.

L2, L3—10 turns 24 s.w.g. on 1/2 watt

resistor.

L4—30 henry filter choke.

L5—2.5 millihenry R.F.C.

L6—Roller-type coil, about 20 turns 3" diam.

C.W. Ratings of Some Receiving Type Tubes

The newcomer to Amateur ranks sometimes finds himself in a quandry in establishing ratings for receiving type valves when used for transmitting purposes. Therefore the following list, abstracted from "Radiotronics" No. 138, should be of interest as it shows the

maximum ratings in c.w. service. In all cases, the maximum value of the grid resistor is 100,000 ohms. The power output is the valve output based on 70 per cent. plate efficiency, whilst the frequency rating is for full power output and input.—VK7XW.

Valve Type	Max. Plate Volts	Max. Screen Volts	Max. Grid Volts	Max. Plate Ma.	Max. Screen Ma.	Max. Plate Dissipn. (Watts)	Max. Screen Dissipn. (Watts)	Power Output (Watts)	Max. Freq. (Mc.)	Grid-Screen Amp. Factor	Max. Grid Ma.
6AG7	375	250	—75	30	9	9	1.5	7.5	30	22	5
6AK6	375	250	—100	15	4	3.5	1.0	4	60	9.5	3
6C4	300	—	—100	25	—	5	—	5.5	60	—	8
6F6	400	275	—100	50	11	12.5	3	14	30	—	5
6V6GT	350	250	—100	47	7	8	2	11	30	—	5
6L6	400	300	—125	100	12	21	3.5	28	30	—	5
6N7	350	—	—100	30	—	5.5	—	7.25	30	—	5

* 26 Wilson Street, Maroubra, N.S.W.

ODDS AND ENDS

BY J. M. COULTER,* VK5JD

Many Amateurs are unaware that a number of articles, designed primarily for other trades, are very easily adapted to their hobby. It is the purpose of these lines to point out a few such items and briefly describe some of their applications.

ELECTRICAL

Appliance Connectors.—These consist of two parts, the male and female. Whilst the female may be a little bulky, it is none the less effective and is much preferred to having long flexible leads attached to power supplies, signal generators, and the like.

Both sections may be purchased but the writer prefers to construct the males from 5/16" brass rod which is cut into lengths of approximately 1 1/2". One end is threaded to take 5/32" Whitworth nuts for mounting on an insulating strip. When completed, the male section is mounted in a suitable position on the piece of equipment and wired to the primary of the transformer. Every-day examples of the use of these connectors may be seen in any home on domestic irons, toasters, etc.

Flush Inlet Sockets.—These are also male connectors and are preferred where the equipment itself is not earthed. They are a little more expensive than the previous item, but are well worth the additional outlay.

Wiring Connectors.—Wiring connectors may be obtained in both porcelain and bakelite. The former are supplied in one, two or three way and make excellent terminals for reasonably high voltage power supplies. The construction is such that accidental contact would be impossible.

The bakelite type are supplied in strips with a total of 24 connections. They make ideal terminals for lower voltage power supplies and facilitate inter-wiring of equipment and controls.

T.R.S. Junction Boxes.—These are extremely neat and handy bakelite boxes supplied with two or four terminals. With the cover in position they give complete protection from accidental shorts or shock. An inspection of these boxes will suggest a dozen uses in the Ham shack.

Neutral Links.—As the name implies, they are manufactured for use in the neutral side of the a.c. supply, but many other uses may be found in inter-wiring, etc.

Nipples and Flexible Conduit.—This combination is particularly useful where complete shielding of the a.c. supply is required between power outlet, control panel and transmitter, etc. Whilst this system is to be preferred, the reader is advised to consult the supply authority as there are a number of conditions (which vary from State to State) in regard to a.c. supply wiring.

The nipples have a thread and lock nut at one end for attaching to a cabinet and a clamp at the other to grip the flexible conduit. The proper use of these fittings provides a safe, neat system of wiring the a.c. supply from outlet to equipment.

*49 Farnham Road, Keswick, Sth. Aus.

Switches.—The variety in style and shape of switches is considerable, but there are a number which are particularly useful to the Amateur Radio enthusiast. Among these are the flush-mounting and micro switches.

The former may be mounted behind panels, have greater current rating and are more durable than the toggle switch.

Basically, all micro switches have the same movement, but the actuation differs, making it possible to use them in a number of ways. They may be used as door switches, panel switches, operated by relay or mounted on the side of a telephone switch so that an a.c. line may be made or broken with a number of other low power d.c. circuits.

Celling Roses.—These are useful where it is necessary to join a solid cable to a flexible lead or even as a junction. In the latter case, a piece of fibre should be fitted within the rose to prevent any possibility of contact through the unused hole.

Celling roses may be obtained with two or three terminals.

Silver Plated Switch Contacts.—A number of different types are available for replacement purposes. They will be found handy for re-vamping relays, etc.

HAIRWARE

A number of accessories may be more cheaply obtained at the hardware merchant than at the radio dealer. Among these are draw handles and "insertvents."

The former are in a variety of sizes and styles and in the shack become chassis handles.

The "insertvents" may be described as gadgets for putting the "finish" on ventilating holes. They are a nickel plated circle enclosing a piece of "fly" wire. Backing this is a serrated edge for crimping in position.

TOOLS

The Spring Loaded Punch.—This is an extremely useful tool for "centrepopping" socket holes, etc., as the operation may be done with one hand. Just place the punch in position and "press." There's a click and spot is marked! Provision is made to vary the pressure of the spring for working on different materials.

Abra File.—This tool is about 1" in diameter and is designed, together with adaptors, to fit a hack saw frame. It may be used to cut holes of any shape in almost any material such as sheet steel, brass, or aluminium and polystyrene, etc. However, the size of the hole is limited by the clearance of the hack saw frame and the relation of the hole to the edges of the job.

Washer Cutter.—These tools are satisfactory for cutting holes of a half to three inches in diameter in aluminium, copper, etc. With specially hardened cutters, they may be used on steel. Lubrication is most important. Oil should be used freely.

In concluding this brief outline of odds and ends, it is hoped that these tips will prove useful and that others may be encouraged to forward similar ideas.

AMATEUR CALL SIGNS

FOR MONTH OF SEPTEMBER, 1952
ADDITIONS

VK— New South Wales
ZDR—M. T. Webb, 171 Albion St., Annandale.
1FL—J. C. Pollock, 116 South St., Summer Hill.
XIR—C. E. Bardwell, 33 Moore St., Harbord.
ZNY—L. A. Wade, 8 Edgar St., Auburn.
SQJ—J. C. Butler, 18 Bridge Road, Homebush.
ZAPT—F. J. Timmins, Pacific Highway, Stockersiding.

Victoria
RAC—R. Cameron, 43 Mackay St., Prahran.
3JD—J. A. Eiton, 23 Wentworth Ave., Canterbury.
3VC—R. K. Wicks, 33 Barry Ave., Edithvale.
3VLC—C. N. Subswell, 263 St. Georges St., Bendigo.
1AEJ—O. L. Evans, 6/o Station JTR, Sale.
3AGQ—G. P. Butler, 70 May Road, Nth. Fitzroy.
3ARJ—J. C. Mulford, St. Helena Rd., Greensborough.

South Australia
3DT—B. Hannaford, 3 Russell Ave., Hazeewood Park.
GUZ—H. E. E. Brock, 24 Marlborough St., Fullarton.

WEST AUSTRALIA
SYM—C. M. Crowden, Wedge Island, via Port Lincoln.
3XN—L. K. Werner, 23 Overland Rd., Croydon Park.

Territories
9YY—A. J. Smith, A.W.A. Aviation Service Depot, Oorah, Aerodrome, Lae, N.G.O.

VK— New South Wales
ZDR—J. Silver Street, Marrickville.
1MG—J. B. Blyth, 125 St. Georges St., Sydney.
3OG—Merelyne Ave., West Pennant Hills.
3HQ—4 Pleasant Way, Blakehurst.
3AQ—Bribane Hotel, Great Western Highway, Emu Plains.

2AP—A. "Arzamel," 354 Norma Road, Palm Beach.
3AC—Police Station, Delegate.
3ARJ—Post Office Residence, Cumnock.
3AVB—Melrose Shoolhaven Street, Kiama.
3AVT—No. 1 Flat, Beach Road, Edgelycle.
3AZH—3121 Main Drive, Port Macquarie.
3AZH—6 Third Avenue, Jannali, Sydney.

Victoria
3IDW—Deschamps Street, Lilydale.
3IQ—Rundle Street, Ararat.
3O—38 St. George's Ave., Swan Hill, (Postal).
3SV—Lonsdale Street, Geelong.
3VJ—13 Serpentine Street, Burray Hills.
3VL—7 Templeton Street, Sale.
3WR—Darling Street, South Yarra.
3AAM—16 Hawthorn Road, Caulfield.
3AR—Signals Section, R.A.A.F., Sale.
3AL—37 Waterloo Street, Port Phillip.
3AOC—43 Empress Street, East St. Kilda.
3AOP—48 Heather Street, West Geelong.
3ARL—4 Burnett Street, Melbourn.

Queensland
4GW—Leeson Street, West Bundaberg.
4KY—c/o R.C.A. Photophones, 171 Ann Street.
4KY—Oatlands Street, Coorparoo.

South Australia
3HU—11 Kitchener Avenue, Netterby.
3HQ—30 Ryan Ave., Woodville West.
3VJ—Dickens St. (Trust Houses), Port Lincoln.
3VK—Snuggery, D. St., Mt. Millicent.
Western Australia
6HM—c/o D.C.A., Coosa Island.
6HM—43 Drummond Street, Bedford Park.

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"Amplifiers, the Why and How of Good Amplification"

"Amplifiers, the Why and How of Good Amplification," by Briggs and Garner. We are quite sure that the quest for the perfect amplifier is one which takes the spare time of quite a number of radio enthusiasts, Amateurs included, and therefore we feel that the book mentioned above will be of considerable interest to a great many readers.

The treatment is unusual as in spite of the highly technical nature of the subject, the reader, through the simply worded text and the disarming style of the writer, finds he has negotiated a complicated subject without finding it difficult.

To illustrate the various points under discussion, large numbers of oscillograph photos are provided, which also helps to give a clearer understanding to the reader.

The subjects covered in this book are numerous and every aspect of amplifier design is discussed, always from the point of view of the man in quest of the perfect amplifier. One chapter which impressed me considerably was the one on phase changers. The tabulated data on the various types, their good and bad points, and the best recommended types to use, would be a must for all amplifier enthusiasts.

One could go on mentioning the various chapters in the same terms, for all have a great deal of information in them, but it is suggested that the next

time you are at McGill's Agency you take a look through this book, and if you follow the quest for the perfect amplifier, it is our guess that it will be reading on your bookshelf.

Our copy from McGill's Agency, 183 Elizabeth Street, Melbourne, who hold Australian distributing rights for this publication. Price 23/9 and 1/- postage.

Philips' Valve Manual

The new Philips' Valve Manual is a most comprehensive tabulation of all the necessary valve data, and socket connections, completely up to date, and its main value to the Amateur is the fact that it covers both American and Continental types, thereby giving a complete coverage of all types likely to be met with in Australia.

The book is fitted with a spiral spring binding so that it will lay flat at any page, and has a semi-stiff cover. In size and information it is a vast improvement on the previous Philips' valve data book.

We are indebted to McGill's Agency, 183 Elizabeth Street, Melbourne, for our copy. Price 8/6.

TECHNICAL ARTICLES

The Technical Editor reports that the technical articles' bag is very nearly empty, so how about it chaps?

Don't forget the beginners have to be catered for, so articles on beginners' equipment are also welcome.

IDEA FOR BARING PLASTIC INSULATED HOOK-UP WIRE

The usual methods of baring P.V.C. insulated hook-up wire are either to cut the plastic with a knife, which is not only tedious, but often damages the wire strands, or to drag the plastic off with a pair of cutting pliers which leaves a ragged end.

The following method is both quick and effective and leaves a neat end on the plastic.

Twirl the wire against a corner of the bit of a hot soldering iron, so melting a groove in the plastic. The end of the insulation may then be removed generally with a light tug with the fingers or at the most with a pair of pliers.

The finished job will have a slight knob on the end of the plastic and this may be smoothed down with a hot soldering iron if it is a disadvantage.

—D. E. Hosking, VK5DH.

ACCURATE FREQUENCY TRANSMISSIONS FROM VK3WI

The next Accurate Frequency Transmission will take place on Thursday evening, 27th November, 1952, on 7 Mc. Details of the operating procedure and times of operation will be found on page 8 of the January, 1952, issue of this magazine.

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1952 REMEMBRANCE DAY CONTEST RESULT

Western Australia Does It!

Congratulations to the Western Australian Division in breaking the iron-like grip on the Remembrance Day Trophy held by the Tasmanian Division for the past three years. There is no doubt that Western Australia worked hard for its comparatively comfortable (sleepless for some) win from Queensland, the efforts of which were none the less meritorious. Tasmania followed in third place and although there was again, marked evidence of good organisation and support within the Division, there was an inadequate number of sufficiently high scores to come out triumphant again.

Although no Divisional organisation as yet exists in the Territory of Papua and New Guinea and thus the entry could not be accepted as competitive, a number of VK9s participated whose scores have been tabulated and a total arrived at in conformity with the rules. Whilst referring to Territories, VK1RG, on Macquarie Island, exchanged serial numbers with many mainland stations, some of whom claimed points for the contest. As the rules as published made no provision for participation by VK1 Amateurs, no points could be allowed. However, the matter of VK1 activity in future R.D. Contests might well receive the attention of Divisions for amendment of the rules as deemed necessary.

As has been found since its inception, the Contest again proved most popular. a total of 418 logs being received as

compared with 384 in 1951, 20 of the additional 34 coming from Western Australia. The only other State to show a marked increase in number of logs was Victoria. In individual scores, however, the all-time high total of 664 set by VK6RU in 1951 was topped this year by VK4CB with 784, VK4FP 760, VK7KB 734, VK6RU 728, VK2AHA, and VK6FL 725 and several others. Whilst in no way detracting from the efforts of these Amateurs, the higher scores by comparison with other years are in a way, a measure of the activity. It is interesting to note that the highest scorer used telephony exclusively on 3.5, 7 and 14 Mc. for 297 contacts and managed four hours sleep! VK6FL mustered the highest number of contacts, 302, using c.w. and telephony on 7 and 14 Mc. Listeners' Logs were received from B.E.R.S. 195, Eric Trebilcock, and Mr. F. H. Price.

Little use appears to have been made of the 21 Mc. band although from a perusal of logs, it seems that the band was open during daylight hours for contacts over comparatively long paths, e.g., North Queensland to Tasmania, and East Coast to Western Australia.

With reference to logs, the standard generally was quite high and in some cases, considerable attention had been paid to neatness and accuracy which greatly facilitate the task of the Contest Committee. A number of stations had duplicated QSOs and where points were claimed, the scores were reduced

accordingly. Several competitors, some with high scores too, did not show a sub-total of points claimed at the bottom of each page, others did not add them up at all, and one with a considerable number of contacts didn't bother to claim any points!

The success of the Contest is a mark of appreciation for those of our ranks who gave their lives in service to their country during World War II. It is an opportunity to renew old acquaintances, many of whom only appear from year to year in the R.D. and it is not infrequently during the Contest that one hears "see you in twelve months." Some of these old familiar calls have not only been heard in all post-war R.D. Contests, but were entrants in the pre-war Fisk Trophy and more recent All Band Contests.

May the 1953 R.D. Contest be an even bigger success with more entrants and logs from all States—in particular New South Wales and Victoria.

—Federal Contest Committee.

REMAINING SCORES

In addition to the six leading logs from each State, the following were also received to help swell the various States' totals and thus increase the bonus:

NEW SOUTH WALES

VK2AWU	470	VK3AMB	178	VK3AJQ	106
SAYP	441	ROT	177	2CN	94
ROW	431	1EO	175	2AJQ	85
2BO	424	2AB2	170	2ZG	85
SATS	417	2IC	169	2AJL	81
2BQ	396	2AA1	162	2AGT	79
2FW	353	2AH	148	2AFP	76
2ASM	317	2AEN	145	2ACC	77
2OY	314	2ABO	144	2SR	78
2AHM	290	2EL	145	2OW	72
2AB	279	2ACV	142	2ACX	71
2CN	245	2JZ	138	2AAW	68
2ADT	234	2ASW	134	2RA	68
2GO	225	2AVC	130	2SF	68
2XO	197	2AMP	110	2BR	68
2XQ	191	2AVK	106	2BT	62

1952 R.D. CONTEST RESULTS

VK6	VK4	VK7	VK2	VK3	VK5	VK9
Division VK6RU 728	VK4CB 784	VK7KB 734	VK2AHA 725	VK3JE 568	VK5FO 557	VK9GW 630
Scores: 6FL 725	4FP 760	7GM 647	2DG 628	3HG 498	5EN 313	5FN 375
6KU 670	4RT 686	7RK 569	2DO 578	3ADW 491	5KN 413	5FW 245
6KW 643	4TN 677	7AJ 457	2VN 566	3ALQ 449	5HR 350	5HI 108
6VM 608	4CC 615	7LJ 455	2WH 537	3AHH 448	5HI 347	5BL 81
6DX 603	4KW 554	7JD 333	2ANN 535	3FH 440	5WO 340	5DT 18
Aggregate: 3977	4076	3195	3589	2894	2520	1455
Average: 662.8	679.3	532.5	598.2	482.3	420.0	242.5
No. of Logs: 50	54	45	83	103	76	7
No. of Licences: 181	303	105	1028	955	330	36
Bonus: 183.1	121.0	228.3	48.4	52.0	96.7	47.2
Total: 845.9	800.3	760.8	646.5	534.3	516.7	289.7



Valves, new, boxed, E.C.A. 834s, £1/8/- each. 6C4s, 12/- each.

Limited number of the following Taylor Tubes: T236s, £2/10/- each; TB35s, £2/10/- each.

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CRYSTALS, as illustrated, 40 or 80 metres, AT or BT cut. Accuracy 0.02% of your specified frequency, £2/12/6 each.

20 metre Zero Drift, £5 each.

Large, unmounted, 40 or 80 metre, £2 each.

Special and Commercial Crystals—Prices on application. Crystals re-ground, £1 each.

BRIGHT STAR CRYSTALS may be obtained from the following Interstate firms: Messrs. A. E. Harrold, 131 Charlotte St., Brisbane; A. G. Hesling Ltd., 151 Pirie St., Adelaide; Atkins (W.A.) Ltd., 604 Hay St., Perth; Lawrence & Hume, Electrical Pty. Ltd., 120 Collins St., Hobart; Collins Radio, 608 Lonsdale St., Melbourne; Prices Radio, 5-6 Angel Place, Sydney.

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NEW SOUTH WALES (Continued)

WESTERN AUSTRALIA

VK2AC	50	VK2QZ	48	VK3ANL	32
2AFC	50	2ATM	45	2AJZ	30
2JUF	50	2ABB	45	2AAJ	26
2JF	50	2JF	41	2AKZ	19
2JF	50	2RK	35	2JY	18
2PK	50	2KQ	35	2DI	17
2RM	48	2ANP	30	2HM	17
2RU	47	2JU	30	2CT	17
2RS	47	2UC	33	2RU	13
2TF	47			2OT	12

VK6DW	407	VK6BC	55	VK6BO	15
6HK	422	6LL	43	6UF	14
6GU	377	6WZ	34	6DF	14
6EC	235	6AV	30	6TY	13
6DJ	349	6AS	30	6WT	13
6AZ	331	6VK	23	6BG	12
6GA	223	6BS	23	6BR	12
6WW	228	6ZZ	23	6GB	12
6JC	205	6RW	22	6JA	12
6LJ	180	6DT	19	6BS	12
6AR	119	6GH	17	6KO	12
6TK	97	6TB	17	6JK	12
6BO	83	6AT	16	6JB	11
6US	82	6PT	15	6JL	11
6WS	80			6KP	10

VICTORIA

VK3AAP	431	VK3LV	102	VK3ARA	23
3AOW	429	3ARP	105	3DG	23
3ASB	424	3WQ	104	3YZ	22
3EJ	411	3EJ	103	3ARK	22
3FO	410	3JJ	181	3SP	19
3JAW	353	3EO	100	3HK	19
3JAM	353	3AJG	99	3QK	18
3XB	378	3GZ	92	3ZM	15
3ZA	349	3ARV	92	3UG	14
3AVB	270	3IO	88	3TH	14
3BN	270	3ALY	82	3KH	10
3ZO	276	3YW	78	3OJ	8
3AN	267	3ZV	77	3H	8
3AZW	263	3UL	69		
3BE	234	3AMD	68		
3PG	220	3AGF	66		
3YF	220	3FW	64		
3AVZ	222	3ADU	61		
3ASG	215	3UJ	59		
3HT	215	3JTR	58		
3YV	205	3ED	53		
3ACA	194	3FO	53		
3SD	187	3AT	51		
3AAF	178	3AKW	51		
3SX	168	3ARM	48		
3KU	166	3TB	46		
3ACI	162	3KV	44		
3ANA	149	3YS	42		
3JC	142	3AGJ	41		
3ANS	138	3AJA	38		
3UO	137	3ALG	37		
3PL	136	3ME	37		
3XD	135	3ALD	36		
3KE	132	3AXC	35		
3KJ	132	3TH	34		
3EB	125	3JL	33		
3AVT	125	3ARL	30		
3AKV	125	3TO	28		
3TI	124	3ADP	26		
3ALP	116	3DP	25		
3ZS	114	3AJU	25		
3AM	107	3AVM	24		

QUEENSLAND

VK4QL	551	VK4OR	81
4DO	417	4BE	79
4DI	406	4FK	66
4EC	400	4KS	65
4FE	374	4GG	63
4ZD	361	4WD	46
4WF	315	4BN	44
4XG	286	4AW	43
4XR	293	4NG	38
4RH	281	4BO	38
4RL	268	4ZP	37
4PT	256	4CF	33
4BL	237	4FT	32
4XL	218	4AF	32
4CK	187	4BU	28
4JF	174	4PK	23
4TB	160	4HZ	23
4RJ	130	4HD	18
4RZ	126	4PD	17
4RW	127	4FJ	14
4HA	108	4ZZ	13
4RH	83	4RW	12
4CO	83	4QO	11
4QR	83	4CZ	10

SOUTH AUSTRALIA

VK3JT	328	VK3EH	104	VK3TL	43
3LC	317	3BY	103	3KU	43
3WY	314	3BF	103	3LL	39
3AX	301	3GM	103	3YQ	33
3DP	289	3JN	102	3FD	33
3CE	283	3RY	102	3ES	33
3FM	283	3TW	100	3KU	31
3CO	273	3HN	98	3KE	29
3WQ	259	3RE	96	3KY	28
3XK	256	3AP	83	3SW	27
3DH	246	3JL	81	3CT	24
3LO	241	3OD	81	3ES	24
3NZ	231	3JK	80	3Z	23
3CA	217	3PW	78	3JM	18
3LD	188	3AW	69	3EA	14
3DO	172	3JG	63	3MA	11
3OK	167	3OK	56	3ZY	11
3JO	137	3MR	57	3WR	9
3WP	134	3WI	54	3D	7
3JW	133	3CT	54		
3TJ	107	3EZ	52		
3MS	106	3FJ	49		



Western Australian Division of the W.I.A. wins the Remembrance Day Trophy

TASMANIA (Continued)

VK7WI	23	VK7LE	17	VK7CW	11
7LK	23	7BH	16	7HB	10
7LL	21	7GB	14	7KL	9
7AB	17	7EK	13	7BR	8

NEW GUINEA

VK9CK 12

Logs from VK5BU and VK7BR were not eligible due to insufficient contacts.
Check logs were received from VK6LG, BERS 180, and Mr F. Price, Perth, W.A.

Don't Forget! Closing Date for Copy for January issue is 1st December.

"TIME ZONES OF THE WORLD"

No Ham should be without a copy of this new publication. Here, for the first time, is a booklet of a handy size devoted solely to an up-to-date documentation of time as it is observed throughout the world today. A time chart to end all time charts! Compiled with the assistance of authorities in over 40 countries, "Time Zones of the World" carries over 300 country listings, six pages of maps, and a UNIVERSAL time indicator. This is true value for 2/6 New Zealand currency. Mail by money order now to C. G. COSTELLO, 115 Hobart St., Miramar, Wellington, N.Z.

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CANTERBURY, E.7,
VICTORIA

Ross A. Hull Memorial V.H.F. Contest 1952

RULES

1. The Contest will take place in the 50-54 Mc. band and will commence at 0001 hours E.A.S.T. on 20th December, 1952, and will continue until 2359 hours E.A.S.T. hours E.A.S.T., 4th January, 1953.

2. Points may be claimed for contacts outside the competitor's own call area.

3. Only one contact with any one station per twenty-four hours commencing midnight E.A.S.T. to count as a scoring contact.

4. Exchange of a serial number will constitute a contact.

5. The serial number of five or six figures will be made up of the RS (telephony) or RST (telegraphy) reports plus three figures which may commence with any number between 001 and 100 for the first contact and which must increase in value by one for each successive contact, e.g., if the number chosen for the first contact is 050, then the number for the second contact must be 051, for the third 052 and so on. If any contestant reaches 999, then he will start again 001 and continue.

6. Scores will be calculated on a points basis as shown in the table appended.

7. Logs should contain the following information: Date, time (E.A.S.T.), call of station contacted, serial number sent, serial number received, points claimed for the contact, and at the foot of each page total points claimed, and at the end the grand total. Logs should be

signed by the competitor, together with a declaration to the effect that the station was operated strictly in accordance with the Rules and spirit of the Contest and that the decision of the Federal Contest Committee shall be final and binding. Logs must be received by the Federal Contest Committee, Box 1734, G.P.O., Sydney, not later than the 25th February, 1953.

8. Entries will be accepted from all States of the Commonwealth and Districts of New Zealand. Check logs from other countries will be appreciated by the Contest Committee.

9. For the purposes of scoring, North-Territory will count as a separate call area, VK9 will be considered as a

State of the Commonwealth, and VK1 (if any activity) as a separate country

10. The decision of the Federal Contest Committee will be final and binding upon all matters pertaining to this Contest.

11. The regulations governing the control of Amateur Radio in each contestant's country must be observed.

12. **Awards.** The outright winner of the Contest within the Commonwealth of Australia will receive an appropriately inscribed certificate and, in addition, if a financial member of the W.I.A., will hold the Ross A. Hull Memorial Trophy for one year.

The highest scorer in each call area in Australia and New Zealand will be awarded a certificate. In addition, the Federal Contest Committee will have the right to make any additional awards.

	VK2	VK3	VK4	VK5	VK6	VK7	N.T.	VK9	ZL1	ZL2	ZL3	ZL4	Other Countries
VK2	..	5	4	2	10	4	5	10	7	7	7	7	20
VK3	..	5	4	4	9	10	6	11	7	7	7	7	20
VK4	..	4	4	5	11	7	3	7	8	8	8	8	20
VK5	..	2	4	5	7	5	3	10	8	8	8	8	20
VK6	..	10	9	11	7	10	12	14	17	17	17	17	20
VK7	..	4	10	7	5	10	7	12	7	7	7	7	20
N.T.	..	6	6	3	3	12	7	3	15	15	15	15	20
VK9	..	10	11	7	10	14	12	3	12	13	14	15	20
ZL1	..	7	7	7	8	17	7	15	12	4	2	3	20
ZL2	..	7	7	8	8	17	7	15	13	4	4	3	20
ZL3	..	7	7	8	8	17	7	15	14	2	4	4	20
ZL4	..	7	7	8	8	17	7	15	15	3	3	4	20
Other Countries	20	20	20	20	20	20	20	20	20	20	20	20	-

To obtain points per contact, look down the column of your call area until you come to the line of the State contacted. The figure where the two lines intersect is the points score for that contact. For example, VK5 works VK4—points score is 5.

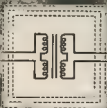
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N.S.W.: University Graham Instruments Pty. Ltd.
 John Martin Pty. Ltd.
WEST. AUST.: Nicholson's Ltd.
 Atkins (W.A.) Ltd.
 Carlyle & Co. Ltd.

DX NOTES BY VK7RK*

These notes are being written in Tasmania instead of VK4 land. As 4QL explained last month, he is being transferred back to VK2 and I will endeavour to carry on until he can get back on the air again. I hardly think that I could improve on his efforts and will consider the job well done if I can approach his standard. One small addition I will make this month will be to separate the phone listings from the c.w. It may not be quite accurate for this issue as most reports seem to cover both types of emission and I will only separate those given to me as being specifically phone. Might I say, with regard to this and any other aspect of the notes—if you don't like it, please tell me.

The bands seem to me to add up as follows:—

3.5 Mc. The only reports on this band come from Eric Trebilcock, B.E.R.S. 195, who, in an interesting letter, covers DX which almost turns my key green with envy. Those he lists on this band cover SL5B0 (1930Z), SM5AQV (2045Z), DL9VBA, DL9OM, UA2AC, UB5DI, DL7BQH, HBIMG, KZ2AA, UA4KCE, DL9UJ, PA0CI, DL7AJ, SM3A0A. From this it appears that the Europeans are really there and it's a matter of going after them. The best I can do is to hear a few Ws on stray evenings.

7 Mc. is providing some of the interest that seems to be fading on 14 and here Eric again supplies some very interesting calls heard: IS1FIC, HH4FL, ZS6OW, SP2KGA, SLIUG, SP8RX, HBIMG, HB1KU, UB8AE, FR7ZA (at 2000Z in QSO Europe), UC2KAB, FYIAHL (2220Z), SP9KKA, 4X4BT, 4X4BX, LZ1KAB.

* S Galvin Street, Launceston, Tasmania.

LZ1KAB, 4X4DH, YI2FD, GD3FSS, YI2AM, ZC4CP, SP3AB, UB8KAA, UG6BM, UR2KAA, ZB1HLW, UG6WD, UB8KAA and many calls like G, DL, F, YO, YU, UA, etc. 4QL evidently managed to squeeze out a few CQs in between packing cases as his efforts netted him ZEZJN*, ZS6AC*, KP4UW* and W2VFD at 2130Z. 2AMB: OA4ED* (0700Z), CR3AG, LU6VH* and KM6AH/KB5* on Canton. From the sunny State 4XJ swapped reports with FUBAC* and VR2 together with lots of W and VE. 3AHH, who is ex-DI2EC, seems to have brought European QRM with him as Hans complains of it about 2000Z to the tune of G, DL, F, I, EA, YU, HB9, OH and FAS for good measure; broke through the noise and worked OH2YK* and G2RT*. 7RK found early mornings around 2000Z to 2200Z good for Europe. Evenings provide Nth. Americans and Pacific states on most occasions. In general PA0AN, G12DHB, OK30US, OH5WX, ZB1KQ, HASKBV, HB9CV, ZS4TK, FASEM, FASVN, ZB1KQ, 4X4BX, LZ1KAB.

Phone seems to be occupying more Kc. on this band with reports like these. 3AHH: HK5ER, OA4B 0500Z, 4CWF: DU7SV; 4XJ: CO2AZ and 2AMB: CT1QC and HC1FG.

14 Mc. Eric B.E.R.S.195: VR1A, VP9BG, VR4AE, ZS2MI, EQ3FM, FB8ZZ, TA3AA, HB1JJ/HE, SV1SMC, ZE5JP, FR7ZA, FE8YB, FI8AB, JY1AJ (a "newbie" on me), KS6AA, ZC4RS, EK1AO 4QL managed such choice morsels as LX1AS, SV0WB, TG8AC*, MF2AG, CT3AE, ZM6AA, HC20S*, PU2AD, FF8AJ*, CE1BD, 4CW: C3AR*, HS1SD*, ZC5VR*, VP6SD*, YV3AB*, YI2AM, KV4VB, OA4AI, CN8GD, KT1WX, ZC5VR (N. Borneo). Says to watch for a Sh. African operating from St. Helena—80w. c.w. and phone. 4XJ is doubtful over B1AB* who gave location as Fommes as his efforts netted calls like ZM6AA*, KB8AX*, DJ1EZ*, CR5AF*, HSIUN*, OK5BG, OQ5EZ, CN8GG and FF8AC. 2AMB: ZS2BC* 0600Z, his total worked now 143. 2ACP: CT3AA* (Madeira Is.), 3AHH: LU3GH*, CN8AF*, and HB, SM, F, G, DL, as worked; and OE13HL, ZS1H, YU, I, OH as heard. 7RK: TA3AA, EI4Y*, CR5AF, KG4TO, HS1SD, VS7NX*, KZ5DE*, OE13HL*, GI 4RY, 4U4J*, plus the more common ones.

Phone reports cover, from 2AMB: FF8WC, 3AHH: HP1CC, KV4BB; and 7RK: C3AR, VS7WL, VR2CM, VS1AY.

21 Mc. is definitely on the up and up. 4QL: PA0KK*, 3AHH: DL7AP at 0900Z, also a KA. 4XJ bagged VQ4HJP*, KH6ANZ*, KH6ARA*, VE7AIH*, W5*, W6* and AD1FEC. 7RK: ZC4RX* (two successive week-ends), VQ4HJP*, VQ4DO, KH6ARA*, KH6ANZ*, KAZFE* and VS2CR.

28 Mc. a dead loss to everyone except the old die-hard 4XJ: KH8NES*, KH6FO*, KH6AHU*, W3*, W6* and W4*.

QSLs appear to be as scarce as ice-cream in OQs as the only one received here all month was VP1FZ. Eric, B.E.R.S. 195, after sorting over LB8XZ (Jan Mayen Is.), FB8XX, FB8BB, EA0AB, 3A2AB, VP5HB, VP8AL, 4W1AC, FB8ZZ, ZC4CP, VQ1RF, 3V8AB, FI2AG,

W6RMG/HL1, HC6NB, VPTNM, TC9RB, SULFX, YV5AE, OE13LI, YI3ETQ, PA3FAS, EA8AM, DL1VU (3.5), HB9BX (3.5), SM5AQV (3.5) found he had cards from 210 countries out of 224 heard. That's really some listening OB.

The gen. section is almost nonexistent, the only item that comes to mind is the change in call signs for Japan. It appears as though the Jap. nationals are now relicensed and are operating with JA calls, the occupation troops having gone over to KA.

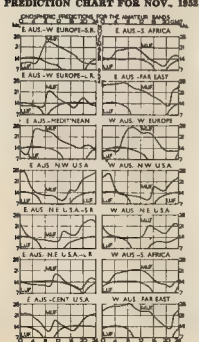
Some QTHs that may be of interest are: OE13HL, QTH Linz, Austria; QSL via A.P.O. 168, c/o. P.M., N.Y.C. KM6AH/KB5, c/o. C.A.A. Canton Is. KT1WX: B.P.O. 97, Tangier, N. Africa.

From the above reports it seems as though no DX is worked from positions west of Melbourne, but my experience tells me different, and I would much appreciate some dope from the other States, particularly VK8 so as to give a general coverage for these notes and make them interesting. Many thanks to those who contributed this month and please have the necessary here by the end of the month.

DX C.C. LISTING

PHONE			
Call	No. Ctr.	Call	No. Ctr.
VK4RH	13 197	VK4P	8 114
VK4V	1 193	VK4VFW	7 112
VK4ZE	10 193	VK4DO	30 109
VK4SD	1 188	VK4MS	34 108
VK4W	1 188	VK4W	16 112
VK4RS	6 188	VK4ADT	13 103
VK4RW	4 130	VK4HA	18 103
VK4LN	11 141	VK4SH	30 108
VK4V	1 141	VK4W	18 112
VK4JZ	7 133	VK4RT	33 101
VK4WF	16 130	VK4HO	8 100
VK4W	17 133	VK4GO	18 100
C.W.			
Call	No. Ctr.	Call	No. Ctr.
VK4RZ	6 207	VK4RZ	30 120
VK4RZ	6 188	VK4RZ	11 125
VK4RZ	16 188	VK4RZ	77 123
VK4RZ	9 187	VK4RZ	3 132
VK4RZ	29 185	VK4RZ	29 118
VK4RZ	1 181	VK4RZ	34 117
VK4RZ	1 181	VK4RZ	37 117
VK4RZ	1 181	VK4RZ	18 116
VK4RZ	28 180	VK4RZ	29 115
VK4RZ	36 180	VK4RZ	34 114
VK4RZ	36 146	VK4RZ	7 113
VK4RZ	4 148	VK4RZ	17 113
VK4RZ	5 148	VK4RZ	36 117
VK4RZ	18 141	VK4RZ	40 104
VK4RZ	53 140	VK4RZ	34 103
VK4RZ	10 138	VK4RZ	16 101
VK4RZ	21 138	VK4RZ	19 101
VK4RZ	33 133	VK4RZ	33 101
VK4RZ	30 130	VK4RZ	33 101
VK4RZ	31 130	VK4RZ	38 100
QPSK			
Call	No. Ctr.	Call	No. Ctr.
VK4RZ	4 230	VK4RZ	53 116
VK4RZ	7 205	VK4RZ	45 115
VK4RZ	18 185	VK4RZ	63 114
VK4RZ	13 190	VK4RZ	14 113
VK4RZ	8 185	VK4RZ	58 113
VK4RZ	33 184	VK4RZ	47 111
VK4RZ	17 171	VK4RZ	38 111
VK4RZ	13 171	VK4RZ	81 110
VK4RZ	2 170	VK4RZ	94 110
VK4RZ	1 187	VK4RZ	35 110
VK4RZ	10 187	VK4RZ	33 108
VK4RZ	24 187	VK4RZ	11 108
VK4RZ	18 187	VK4RZ	38 105
VK4RZ	30 144	VK4RZ	18 104
VK4RZ	36 148	VK4RZ	37 104
VK4RZ	5 130	VK4RZ	44 104
VK4RZ	19 137	VK4RZ	30 103
VK4RZ	40 137	VK4RZ	17 103
VK4RZ	22 136	VK4RZ	20 103
VK4RZ	41 135	VK4RZ	37 103
VK4RZ	28 133	VK4RZ	42 103
VK4RZ	45 133	VK4RZ	31 102
VK4RZ	9 132	VK4RZ	33 102
VK4RZ	30 135	VK4RZ	19 101
VK4RZ	33 118	VK4RZ	6 100
VK4RZ	33 118	VK4RZ	39 100
VK4RZ	33 118	VK4RZ	39 100

PREDICTION CHART FOR NOV. 1983



FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

VK3 HEARD ON 2 MX.

BY ZLs

Keen interest is being displayed in the 2 mx band as reports of amazing distances being covered continue to come in. The latest of these reports concerns the 2 mx signals of VK3RR at Horsham which were heard by ZL3AQ on 2nd October. We are indebted to D. W. Buchanan, ZL3AR, of Ashburton, N.Z., for the following information.

Thursday, 2nd October, early evening was very warm, calm and pressure was high at 30 inches. 144 Mc. conditions were exceptionally good, the Christchurch boys 50 miles north and the South boys through Temuka, Geraldine to Timaru 50 miles south, simply pounded in although in several instances were running some 15 watts to mod. osc. A signal which heterodyned ZL3CS on 145.6 Mc. for at least 20 minutes was logged as VK3RR by another local, ZL3AQ, when he signed as Victor King. Three Roger Roger at 0807 G.M.T. His signal was steady for a long time at Q5 S5 to S8." (Time and frequency have been checked with 3RR—Ed.)

Also by courtesy of ZL3AR we publish the following list of ZL3 stations active on the 144 Mc. band.

Ashburton—

ZL3AQ: 100w. to p.p. 826s, beam 5 over 5, 144 Mc. crystal.
ZL3AR: 100w. to p.p. 828s, beam 5 over 5, 146.19 Mc. crystal.
ZL3JQ: 70w. to 828, 4 element beam, 145 Mc.

Christchurch—

ZL3LE: 100w. to p.p. 84Gs, 16 element beam, 144.15 Mc.
ZL3KS: 70w. to 829, 4 over 4, 144.4 Mc.
ZL3CQ: 70w. to 829, 4 over 4, 145.6 Mc.
ZL3CA: 70w. to p.p. 834s, 4 over 4, 145.5 Mc.
ZL3QW, ZL3QE, ZL3GV, ZL3FM: operate about 15w. to mod. osc. p.p. 7193s.

Geraldine—

ZL3JO: 70w. to p.p. 834s, 16 element, 145 Mc.

Temuka-Timaru—

ZL3LD, ZL3SE, ZL3DY, ZL3KQ: operate mod. osc. about 15w. to p.p. 7193s.

ZL3AR also operates 1,300 ft. up in Peat Hills to Southern Alps under the call ZL3JG with 100w. to p.p. 826s, 5 over 5 beam, on 146.1 Mc.

Recently returned from a trip to England, VK7BQ tells this story about the ingenuity of a group of G 144 Mc. operators

It seems that this group had considerable difficulty in working into London due to an intervening range of mountains, until a parasitic array was erected on the highest point of the aforementioned mountain range. This array was then shock excited by directing the transmitting stations' antennae at it, result! Consistently reliable contacts with London stations. With due respect to the G Hams concerned it should be

mentioned here that this idea was suggested to the writer some 12 months or so ago by VK3RR as a means of working from Horsham to Melbourne under similar conditions. You win Dick!

NEW SOUTH WALES

The last meeting of the V.h.f. Group at Science House was a huge success and everybody thanks Barry ZABR for his fine lecture on "Crystal Control Converters." A field day of some importance was held on the week-end of 4th-5th October and at least nine parties planned to man the mountain tops near and far. Much time and feverish effort was spent making ready for the big event. Parties participating were 2ANF, 2HL, 2AST, 2OA, 2AOA, 2PN (Tumut), and 2NV. We understand that the Canberra Radio Club and the Royal Naval Radio Club participated in the field, good work boys.

We wish to congratulate Hugo 2WH and 2PN for their recent effort in two way contact on 144 between Forbes and Tumut, a distance of 138 miles as the crow flies. They have tried a long time for this to happen, and have succeeded at last—good work boys.

Although 144 Mc. has been quiet, the following stations have been heard at times: VKs 2ANF, 2LZ, 2NS, 2WH, 2RU, 2GA, 2KR, 2LG, 2HL, 2NP, 2DF, 2JY, 2XX, 2YR, 2WJ, 2VL, 2WF, 2YM, 2OA, 2DP, 2JH, 2HE, 2OK, 2BM, 2HO, 2ADT, 2ABC, 2AST, 2AJZ, 2AZK, 2AZO, 2AHP, 2ABR, 2ATO, 2ABZ, 2AYM, 2ARG.

2MQ is shifting, end shift. Where are the others? 2AWZ, 2ABO, 2XG, 2AQQ, 2AH, 2PU, 2PF, 2ALU. What about a show? There has been some activity with mobile units here of late, 2ANF, 2HL, and 2ABZ have been out with signals all round. 2XJ will be on 144 soon, so keep a look out for him.

50 Mc. has been very quiet, only stations logged here were 2RU, 2ADT, 2VW, 2HE, 2JX, 2ABR, 2NP, 2ABC, 2GA, 2KR, 2ANF, and 2HO.

580 Mc. is also quiet and no news was forthcoming this month. The usuals are 2WJ, 2AJZ, 2DF, 2LZ, 2JX, 2LY and 2XX. 2LZ has heard Sydney stations from Wentworth Falls and reports S5 R8 signals, good work Con.

2HL has a new 12 element 144 Mc. beam finished. 2MQ has finished his 16 element 144 Mc. beam, hope we hear him soon. 2ANF has just finished a complete portable and mobile outfit, xtal controlled, 832 in final, also xtal cascade converter and tunable i.f. stage—all run on generators with excellent efficiency.

Please remember to pass on any news if it is of interest to you.—2HO.

VICTORIAN DIVISION V.H.F. GROUP

At the September meeting of the Group, Len Jackson and Col 3FO described their 6 mx mobile gear which was available for inspection. Of compact construction, the Tx and Rx were built into separate boxes 6" x 4" x 3". The Tx consists of a 12AU7 twin triode as an overtone crystal oscillator and doubler driving a 12J5 final with 5 watts input.

The Rx uses four tubes commencing with a 6AG5 r.f. stage and a 12AT7 as mixer and oscillator. The first i.f. amplifier is a 6SH7 at 1600 Kc. followed by a 12C8 as second i.f. stage, detector and a.v.c. A germanium diode provides an effective noise limiter.

An audio unit in a separate box 6" x 6" x 4" with speaker consists of a 12SQ7 driving a 12AB which does double duty as a plate mod. or Rx audio amplifier. The antenna used is a vertical co-axial dipole mounted at the rear of the car. A genemotor provides d.c. h.t. of 280v. at 80 Ma using a 12v. battery from which 5 amps. is drawn, including filament drain. Best DX worked so far is VK2.

A discussion on field days took place and the following dates were agreed upon for the coming season: Oct. 5, Nov. 2, Dec. 14, Feb. 1, Mar. 15, Apr. 26. The October field day was arranged to coincide with the 144 Mc. field day week-end in N.S.W. 3UL, operating portable from Mt. Major, worked 2PN portable near Tumut. The line-up of Alan's Tx is a 6AG7 xtal osc. multiplier, 6AG7 dbtr., 832 tribr., and 832 final with 20 watts input.

It is proposed to hold a contest commencing with the November field day, the rules to be finalised and made known later.

Efforts are continuing each evening to establish contact between VK2 and VK3 on 144 Mc. VK2 stations call, with beams towards VK3, from 8.30 to 8.35 p.m. E.S.T., and then listen for our signals during the following five minutes. Judging by the achievements elsewhere it should eventually be possible to span these paths.

Meetings of the V.h.f. Group are held on the third Wednesday of each month at the Institute Rooms, 191 Queen St. All are invited to attend. Listen to 3WI for further information regarding meetings and field day news.—3ABA.

SOUTH AUSTRALIA

Activity seems to be increasing on all v.h.f. bands and some good work should be done this summer. SJD has been on leave and made a visit to VK3, active on 50 Mc. 5ME heard with xtal rig on 288—p.p. 6AK5s tripler feeding the antenna was the line up; quite a good signal SLD. 5QR testing 16 element beam on 288 and now S9 plus at 5GL's; going to test it out against 5GF's corner reflector. Stations active on 144 Mc. are: 3FL, 5AJ, 5MT, 5KC, 5CA and 5GL. SMD was heard on 50 Mc. in QSO with SJD; a nice signal Doc. SJD's mod. percentage is rather low.—5KLL.

50 Mc. W.A.S.

Call	Number	Additional Countries
VK3VW	8	—
VK3VJ	3	—
VK3Y	3	—
VK3HR	4	—
VK3LC	1	—
VK3QW	2	—
VK3PQ	8	—
VK3RR	8	—
VK3H	7	—
VK3AEZ	10	—
VK3XA	11	—
VK3Y	11	—
VK3ACL	14	—
VK3ED	18	—
VK3BC	8	—
VK3AB	18	—

FEDERAL, IASL, and DIVISIONAL NOTES

FEDERAL

55th ANNIVERSARY OF E.D.R.

This year the Danish I.A.R.U. member-society, Eksperimentelle Danske Radiamatører (E.D.R.), celebrated its 55th anniversary, and appropriate ceremonies are being held. On Saturday, 3rd August, there was a jubilee festival in Copenhagen at which a Region 1 delegate represented the I.A.R.U. E.D.R. has been appointed by the Region 1 committee for the 1963 All-European DX Contest in December for which E.D.R. is issuing special certificate awards for contacts with DX stations.

The Contest will be c.w. section commences at 0001 G.M.T. Saturday, 28th December, 1962, and concludes at 2400 G.M.T. Sunday, 13th December, 1963.

Phone Section commences at 0001 G.M.T. Saturday, 13th December, 1963, and concludes at 2400 G.M.T. Sunday, 14th December, 1963.

The W.I.A. Joint club, I.A.R.U. member-societies in wishing E.D.R. 73 and congratulating it on its 55th anniversary first organised in 1907, E.D.R. became a member of the I.A.R.U. in 1929 and has faithfully served the Amateurs of Denmark for twenty-five years.

11 MEGACYCLES

Although probably many other countries have since permitted their Amateurs to operate on the 21 Mc. band, the I.A.R.U. June, 1962, Calendar officially lists the following countries as having licensed Amateurs to operate there—

Australia, Belgian Congo, Brazil, Burma, Canada, Cuba, Denmark, Dominican Republic, Ecuador, Guatemala, Iceland, Netherlands, Netherlands Antilles, New Zealand, Panama, Peru, Southern Rhodesia, United States of America, and Uruguay. England has since granted this band to G Amateurs.

LEBANESE AMATEURS ACTIVE

Amateurs in Lebanon have finally succeeded in obtaining official government sanction of Amateur Radio. The Lebanese Government has notified the I.T.U. that it no longer objects to Amateur Radio operation, and the prefix OGB has replaced the familiar AHB.

AMATEUR BAND SUB-ALLOCATIONS

THROUGHOUT THE WORLD

In accordance with a suggestion from the W.I.A., I.A.R.U. Calendar No. 44 carries a summarized chart of Amateur band sub-allocations in various countries throughout the world. This chart was compiled from information supplied to Headquarters by member-societies of the Union. Unfortunately not all member-societies responded to the request for information concerning their respective Amateur bands so Headquarters have called for any corrections and/or additions to the chart. When the complete chart is available it properly should be published in "A.R." for the information and interest of all Amateurs.

NEW MEMBER-SOCIETIES TO THE I.A.R.U.

The following Societies have been granted membership to the I.A.R.U. by a majority of votes of member-societies of the Union—

Radio Society of Bermuda (R.S.B.).
Guyanaquill Radio Club (member society for Ecuador (G.R.C.))

Deutscher Amateur Radio Club (D.A.R.C.).

Vereniging voor Experimenteel Radio Onderzoek in de Nederlandse Antillen (member society for the Netherlands Antilles) (VERONA).

FEDERAL QSL BUREAU

RAY JONES, VK6RI, MANAGER

Leon PAUL, VK3XQ, advises that cards for all contacts made by VK3XQ have been despatched. N1's log is still held by him.

The new address of the I.R.T.S. QSL Bureau is care E152, 23 Orwell Gardens, Rathgar, Dublin, E. of Ireland.

Joe Austine, VK3YL, advises that F1QX and the rest of the F range are keen to QSO VK and ZL on the 21 Mc. band. They are listening every week Sunday from 0600 to 1100 G.M.T.

The E.D.R. Denmark are sparing no pains to make the sixth All European DX Contest a success. They are issuing a booklet in publicity. A printed of the rules has already been published in "A.R." and a full copy of the rules is held at this Bureau. The c.w. section com-

W.I.A. ACTIVITIES CALENDAR	
November 1-8:	"CQ" World Wide DX Contest, C.W. Sections
December 6-7:	European DX Contest (all bands), C.W. Sections
December 13-14:	European DX Contest (all bands), Phone Sections

mences at 0001 G.M.T. Saturday, 8th December, and ends at 2400 G.M.T. 7th December. The phone section begins at 0001 G.M.T. on 13th December and ends at 2400 G.M.T. 14th December. This year's Contest is staged by the E.D.R. in conjunction with the 25 years jubilee of the formation of this Society. Previous countries staging this Contest were: 1947, Netherlands; 1949, France; 1950, Czechoslovakia; 1950, Sweden, and 1951, Great Britain.

Felix Franchette, FK8AC, currently on furlough in France and operating under the call sign of F1QX, expected to commence operations from Tamaris at end of September. Felix advises he has sold his house at that location and has purchased a larger one and much better suited for radio station. The location is on top of a hill and has plenty of grounds surrounding the house, admirably suited so he says we have some hope to be in full blast about the end of October and remain active until his return to New Caledonia towards middle of 1963.

Robbie, of VK3QZ, is abroad again. This time he pops up from New Hebrides, under the call sign of YJ1AB. He expects to be at Vila until end of November.

NEW SOUTH WALES

The September meeting of the N.S.W. Division was held at Science House on Friday, 28th September with the President, Mr. John Moyle, in the chair. There was a large attendance, no doubt to hear the lecture on "Test Equipment".

The meeting was opened at 8.10 p.m., a point which aroused a little criticism later in the evening. The lecture by Mr. Moyle on the disposal within twenty minutes of the speaker, welcome to visitors, minutes, correspondence, etc.

The lecture, which was delivered by Mr. Reg Rawlings, of Philips Pty. Ltd., was not therefore unduly delayed. It was very interesting and covered a very wide range of test equipment, perhaps too wide. Typical examples of most of the types were described briefly. Such things as vacuum tube voltmeters, valve testers, signal generators, frequency meters, audio frequency oscillators of various breeds, square wave oscillators, distortion meters, and countless types of equipment based on the cathode ray tube came under discussion. Obviously an explanation of the purposes of some of the instruments was necessary so that detail was at something of a premium. This was made up for in the discussion in which the boys soon showed their desire for details. This looked like continuing indefinitely until the Chairman had to call a halt in order that some general business could be dealt with. The lecture was well illustrated by a host of commercial test instruments which made the boys drool with envy.

A quick round-up of current Amateur events and affairs was given by the President. If you have not made a note of the Way Way Field Day date DO IT NOW. Sunday, 16th November, and if you leave your decision to the last minute you can pay at the door. Bring the YL or XYL and if possible they will be enjoyment for all. The answer to a question regarding the official organ of the W.I.A. was

SILENT KEY

It is with deep regret that we record the passing of—
ZL1A/LZ-VRSQA—Pat Spry, of Kamo Whangarei, N.Z., on 21st August, 1962, in the Auckland Hospital.

given and nearly started another futile argument like the one at the previous meeting whence the question emanated, but the Chairman rightly squashed the argument in its infancy and called for a motion of motion to give a basis for discussion which might lead to finality on the subject. The meeting closed at nearly 11 p.m.

HUNTER BRANCH FIELD DAY

Blacklacks, Lake Macquarie, was the point to which Hunter Hams and their families headed for the annual field day. The Branch's Combined Social and Field Day, with beautiful day, 35 OMs plus their XYLs, YLs and harmonics congregated at the hall which was the focal point for the day's events. All day, from the very young up, enjoyed themselves thoroughly whether they were quaffing ice cream and soft drinks, chasing hidden Tx, running in a 3-legged race, or testing emission of an "8137". A novel innovation which went very well was the Tons Guessing and C.W. Competition.

The hidden Tx event was most popular, due no doubt to the fact that practically every Ham and Associate present was able to participate. The Ham spurs were showered here, with being run in two heats (a prize for each), so that parties in the first heat losted their Rx's to the second heat. The second heat was being moved to another location. Max ROT and Secretary Dave ZEO, Ern IFP and party, who were first to announce they would give the prize to ZEC whose gear they used—Jim could not be present because of work. Another event which provided much fun was the Ladies' Mail Driving Contest. Going on from shown by some XYLs, it won't be surprising if next time there is some shack building to be done, the hamster will be presented to the lady of the house!

ABBREVIATION OF NOTES

The paragraph "What Do You Think" in the September issue brought forth many letters from all States including one ex-VK3-VK7 now in England.

The general consensus of opinion was that the Divisional Notes should be continued, but that all unnecessary padding should be eliminated.

Would all Contributors of Notes please endeavour to write their notes in a more concise form.

We are always pleased to see our friends the R.I.B. at our functions, and this time we had the honour of entertaining the District Radio Inspector Pat Lobegier and his XYL and family, and Assistant R.I. Frank Hincks, XYL and family. It was also pleasing to have at our September meeting the representative of the Divisional Council, and QSL Officer Jim BYC who was a most popular man when he arrived with a host of DXs had many tasks to keep him busy all day, chief among these being operation of the 144 Mc. hidden Tx, his helpers in this being Vero ANA and Associates. No less busy, 2AXM did a good job maintaining a 40 mc link from the hall to the hidden Tx with his 8Wc. Genetec. General and round up, a close vision of a p.c. gear was given by Ken ZKC. Thanks are also due to Neil ZXY who provided the 144 Mc. Tx, to Treasurer ZXT for his "XT

Special! brew, to Frank 2FX and Station 2KO for the tone c.w. recording, to Bert Harvey for operating the film projector by courtesy A.G.E. Newcastle, to John Cowan for his piano playing, and to all who gave a hand.

At the conclusion of events, prizes were presented to the following winners by President Lionel Swain:

Transmitter Hunt: 1st Heat—1st, 2EO, 2FP, 2OT and party with 2ZC's gear, time 5 min.; 2nd, 2DG, 2ADT and party with 2VU's gear, 2nd Heat—1st, 2DG and party using 2VU's gear, time 7 min.; 2nd, F. Hinckes Aust. RL and party with 2ZC's gear; 2nd, 2NX and party with 2AHA's gear. **Tone Guessing—1620 Cycle Tone:** 1st, 2KO, 1620; 2nd, 2AGD, 1858. C.W.: 2EO 1st. Lucky number prize of two speakers won by XYL of Associate Les Sparks, Ladies' Mail Driving; 1st, XYL 2AGD; 2nd, XYL of 2ABA. **Women's Race:** 1st, XYL 2DG, Visitors' Race: 1st, Valerie Fitton; 2nd, Judy Cowan. **Three Leased Race:** won by 2AHA's XYL and 2FP's daughter. **Boys' Race:** 1st, Barry Hudkin.

SOUTH WEST ZONE

Noel 2OJ at Albury heard on 80, also Don 2RS. Ron 2FM at Canberra reports all Hams there are interested in the new club, which has about 40 members. The call sign of the club is 2ACA. Peter 2APP changing all his gear, says he is sick of the look of his old set-up. 2PL at Griffith active on 40 and still trying to collect new Hams at Griffith, good Jack Stewart, 2BQ at Tumut heard on 80 with very solid signal. 2APZ at Leeton active once more on 40 and 80 after having considerable trouble with his ATB. It is good to hear you again Ray. 2RH at Yerrinbool active on 30, 40 and 80. Ron can be heard "earbashing" on 80 most evenings with the usual gang. 2AJO active on 80, 40, 30 and still trying to break through on 144 Mc.

COALFIELDS AND LAKES ZONE

The latest activity from 2ANU is concerned with coaxing (either interpretation of the word applies) energy from an oscillator on 288 Mc. into an antenna system. 2VU is now set up to work straight on 144 Mc. and is only waiting a suitable opportunity to become a piece of DX for the gang. 2ADT has been keeping one eye on 21 Mc. and is slowly gathering them in. Had a nice session with Europeans one evening recently. 2VL feels like coming on, but can't find the time. 2PZ still working on

JANUARY ISSUE

This time every year a plea is made to Advertisers and Contributors to forward copy early for the January issue.

To explain once again—as the printers close down for annual holidays from just before Xmas until the middle of January, it is necessary—if the magazine is to be posted to you on the 1st of January—for the magazine to be printed before Xmas.

Therefore it is requested that material for the January issue must be in the printers' hands by the FIRST of DECEMBER.

Your co-operation in this matter will be much appreciated.

—Editor.

7 Mc. and planning other gear. 2KRF has been heard on 1, 14 and 144 Mc., but no sign of 2KZ.

Major 2SU is another one interested in 21 Mc. and works them when they are there. He is forced to work 2ADT via Perth on that freq. 2AEZ has joined the old men on 25 Mc. together with 2EF who has now progressed to the stage of operating with the charging system running. This last fact accounts for the sudden shortage of 0.1 uF. condensers in the various warehouses. 2KRF and 2GA are still keeping their area on the map on 144 Mc. The zone was represented at the Hunter Branch Field Day by 2VU, 2PZ, 2RU and 2ADT, all with their families. On this occasion, 2VU gave his portable gear its maiden run in the 144 Mc. Tx hunt with successful results in both heats.

HUNTER BRANCH

September was a very busy month for those organising Branch activities. Thanks to the hard work of our Committee and their assist-

ants, the Field Day/Social went off with great fervour. Details are given elsewhere in this issue, and a report on the Maitland meeting has appeared in the Bulletin.

President JCS pleased with his "lickyva-switch" all-band (including 21 Mc.) exciter; Lionel only needs a final now! Two more certificates to DX specialist ADG. Keith received Certificate No. 21 for Worked All Japan, and a beautiful hand made silk Certificate of Merit for working all Swedish Districts; XYL has her eye on latter for scarf! Other Maitland men 2XQ and 2ANI mainly active for schels on 80 and 20 respectively. Harry 2AFA pleased at receiving QSLs for both his XYL contacts on 40 mhz c.w. 2AGD's Tx doesn't need a good antenna; although his dipole only few feet high. George beat all VK competition for 58 report from CWR on 20 mhz phone. 2EG one of our keenest members; Ken always helpful and co-operative at Branch functions. Valuable behind the scenes assistance is also given by Frank 2FX. These things are appreciated by the Committee which is always grateful for help given.

The bug bit 2AWD again. Arch put f.b. sig on 40 from his xtal controlled 10 watt. Ivan 2IS also came out of moth-balls for brief session. 2TX on again too; Bert can still get 58 from DX land on 20 mhz phone. Merv 2AAM yarned to 2PQ on 20—tried to interest Tom in 2 mhz, but latter wants to finish his all-band exciter. 2PJ has new c.w., built n.b.f.m. unit for 80, and replaced 6V5 mod. with 80A. 2AGY working plenty of Europeans on 20 mhz c.w. 2CN feels lachrymose after VK4 holiday. 2WP pays us nice compliment; says spirit of Hunter has enticed him to join WLA. Bill's 2AISC got him f.b. report from OAA on 40 mhz. 2XY working on Branch's Tx—amongst others! Doug 2ADS pleased with improved reports on 144 since adjusting the feeder on his 3/3 beam.

Ernie 2FP has the ARI alongside bed now—frightened he'll miss something! 2KQ starting to organise in new shack; Jack using temporary unit on 20 and 8 mhz. 2ABA received a shock when his harmonics sprang a surprise party for his Silver Wedding Anniversary. All Christmas greetings to 2KX and 2PHYLIS. 2AXM's "Mighty Midget" Tx getting Bill 59 reports from all States. Max 2OT has a 40 mhz Rx on car dashboard which really drags 'em in. The Field Day has given 2NX added enthusiasm to get on air again. Best of luck to



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Notice of Meeting.—The last meeting before the Xmas Social, and last for 1932, will be held at Technical College, Tighes Hill, on Friday, 14th November. Listen to 2WI for details. An early warning! This year don't fail to notify Secretary of composition of your party for Xmas Social so we can cater accordingly. Please advise number, sex, and age of harmonies—that is most important.

Byd 3CI is shifting his rig out on to the back verandah. Doug 3DW is moving down to Lilydale. Former PABYX and PAOHC have come to live in a new flat at Lilydale. Doug 3DW has a little house painting in his spare time as well as radio and driving a new car. Ken 3KR was still working the DX when last heard and has added fifteen new ones. The latest from Ken is that the DX has faded a bit though. Rex 3UR is still on 86 mc. Jack 3FW was using only nine watts on the regenerative hook-up. Doug 3UR has a new rig with a 100 watt lift to be being towed to simplify the making of adjustments. Jim 3JK has gravitated to 3 mix now. Keith 3JC put his 30 mc beam up with the direction in the 30 mc band. It is working well now so it is in the right place.

The monthly general meeting of the VKS Division was held in the club rooms to a slightly smaller gathering than usual, 84 mem-

SJA is also seen on 1 mx occasionally and is rewilding his main 2x power tranny. BMS is busy setting up but has had time to greet, and he's been very friendly. He's got a lot of sort out some gear. SCJ is supposed to be on holidays, but when you know that on 18th November he'll be back, it's hard to believe. A beautiful daughter, the word holidays seems a little superfluous. What is the little darling's name? She's a lovely girl. The caravans have returned from a caravan tour of Victoria-Melbourne to Sydney-Canberra-Buck home via Melbourne. They're all well. The caravans are steady now. He met a number of his 50 MC friends in and around Sydney and stayed with them for a few days. He was very happy. How many nights? Huggle had a wonderful time and met quite a few good Hams. SRK is still active and is looking forward to the next year. In fact his XYL is threatening to put an axe through his gear if he doesn't get active in the next month or so. He's got a lot of trouble with gremlins, to wit, "hum" trouble, but M-

The monthly general meeting of the VKS Division was held in the club rooms to a slightly smaller gathering than usual, 84 mem-

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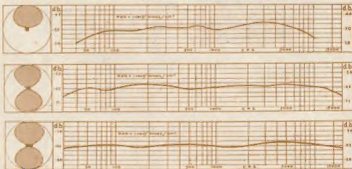
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